

During the entire season 885 forest fires or 55 percent of all of the fires on these national forests were started by lightning. This great source of forest fires, in which

most of the danger was concentrated upon relatively few days, placed a peak-load burden upon the fire protection organization.

PRELIMINARY REPORT ON TORNADES IN THE UNITED STATES DURING 1935

By R. J. MARTIN

[Weather Bureau, Washington, January 28, 1935]

In keeping with the custom of recent years, a preliminary statement of loss of life and property damage by windstorms is here included in the December issue of the *REVIEW*. A final and more detailed study will appear in the Report of the Chief of the Weather Bureau for the year 1935-36. Practically all the information given in this summary is abstracted from the monthly tables of "Severe Local Storms", which are compiled from the reports of many observers and various section directors of the Bureau. While it is thought the figures given are substantially correct, it must be remembered that all are subject to change after the final study mentioned above.

May, with 44 (possibly 45) tornadoes, was the month with the greatest number of such storms; but the total loss of life, 16, was considerably less than the April figure. June, with 28 (possibly 34) storms, was second, while March had 26 (or 32) and April had 24 (or 27). February and July each had 16 tornadoes, but the later study may change the July figure to 21. The greatest loss of life occurred in April, when 28 persons were killed; 17 deaths were reported in Mississippi and 9 in Louisiana, caused by the storms of the 6th, which are described in the April 1935 Climatological Data for these States. The deaths in Louisiana occurred when the tornado capsized a houseboat. Tornadoes caused 16 fatalities during May, and 13 persons were killed in Texas on February 8 by a tornado which struck 8 counties. Storms resulting in four or more deaths occurred in Nebraska (May 31), Arkansas (June 21), and Mississippi (March 31).

Tornadoes occurred without loss of life in August, October, and November. June had six fatalities, July had five, and four deaths resulted from these storms in September. No tornadoes were reported in January or December.

The total property loss caused by tornadoes in 1935 is estimated at over \$4,917,000; March, with estimated tornado or tornadic wind damage of over \$1,217,400, was

the month of greatest property loss. The second highest figure was \$1,009,600 in April; over \$395,000 of this was caused by the Louisiana and Mississippi storms (mentioned above) over paths varying in width from 17 to 880 yards. The June storms resulted in losses of more than \$979,500, of which \$300,000 occurred on the morning of the 21st at Texarkana, Ark., and vicinity.

The total number of tornadoes during the year, approximately 179, was 32 more than in the preceding year, but 81 less than in 1933; the 1935 total has been exceeded 4 times in the last 20 years. During March and May of 1933, 150 tornadoes occurred; the total for the corresponding months of 1935 was 70. The total number of deaths resulting from the 1935 storms is estimated at 86, which is nearly double the figure for the preceding year (47). Other than the Texas, Louisiana, and Mississippi storms mentioned above, there were no unusually severe tornadoes during 1935, and each of these have been greatly exceeded in other years.

If further study shows the storms listed in the table of tornadic winds to be true tornadoes, the 1935 sums will be 200 tornadoes, 86 deaths, and property losses exceeding \$5,514,300.

TORNADES AND PROBABLE TORNADES

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Number.....	0	16	26	24	44	28	16	8	13	1	3	0	179
Deaths.....	0	14	13	28	16	6	5	0	4	0	0	0	86
Damage.....	0	507.0	1,075.4	1,005.6	884.4	719.5	341.8	52.1	302.3	4.5	24.4	0	4,917.0

TORNADIC WINDS AND POSSIBLE TORNADES¹

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Number.....	0	0	6	3	1	6	5	0	0	0	0	0	21
Deaths.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Damage.....	0	0	142	4	4	260	187	0	0	0	0	0	597

¹ In thousands of dollars.

² Some of these may not be classed as tornadoes in the final study.

THE WEATHER OF 1935 IN THE UNITED STATES

By R. J. MARTIN

[Weather Bureau, Washington, D. C., February 1935]

The year 1935 averaged nearly 2° cooler than 1934; and precipitation, while still subnormal, was considerably more plentiful than in the preceding year. The temperature departure, all sections considered, was +0.7°, as compared with +2.5° in 1934, and the precipitation departure was only -0.6 inch; in 1934 it was -3.7 inches.

Table 1 shows that for the year as a whole only three sections of the country, New England, the Florida Peninsula, and the lower Lake region, averaged cooler than normal, and the maximum deficiency (lower Lake region) was only 0.3°. Five sections were exactly normal, while in the other 13 the temperature ranged from 0.1° to 1.1° above normal. The relatively warmest section was the Middle Slope (portions of Oklahoma, Kansas, and Colorado). The relatively warmest month was February,

when the entire country averaged 3.3° above normal; in March the excess was 3°. January, July, August, September, and October were also warmer than normal, while April, May, June, November, and December were below normal. May, with a negative departure of 1.8°, was the relatively coldest month, followed closely by December, with a deficiency of 1.7°. In February, only 2 of the 21 sections had subnormal warmth and in both instances the deficiency was only 0.5°; in North Dakota that month averaged nearly 16° above normal, and elsewhere the plus departures ranged from 0.1° to 8.8°. The largest sectional negative departures occurred in December, due mostly to severe cold in the latter part of the month, and ranged from less than 1° to more than 7°.

Chart 1 shows that those sections of the country averaging cooler than normal were few in number and of